

Case Report

Primary oral myiasis: A rare case report of myiasis in between a fractured central incisor in an adult

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ABSTRACT:

Oral myiasis is the rare parasitic infestation of tissue & humans caused by the larvae of dipteran flies. It is associated with neglected oral hygiene, senility, immunodeficiency, systemic disease like diabetes, alcoholism, mouth breathing, low socio-economic status & other conditions. This article aimed to report a case of myiasis in between the fractured fragment of central incisor. Patient's management included surgical exploration to remove the larvae by suffocating technique with use of turpentine oil, I.V. Ceftriaxone 1gm daily & use of intra lesional Ampicillin+ Cloxacillin powder after debridement at the time of closure. After complete larvae removal the swelling & wound healing normally. After 1 month of the follow up no fresh episode is seen.

Keywords: oral myiasis, parasitic infestation, Diptera, immunodeficiency

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INTRODUCTION

The term myiasis (Greek: myi = fly) is used for refer the infestation of living tissues of humans & animals by dipterous egg or larvae.¹ Term was coined by Hope FW in 1840. Myiasis was defined by Zumpt as infestation of live human & vertebrate animals by dipterous larva, which at least for certain period feed on host's dead or living tissue, liquid body substances or ingested food.² Myiasis is a worldwide phenomenon, the prevalence of which is related to the geographic situation and life cycle of various species of flies. A higher incidence is reported in rural population, especially in tropical and subtropical areas of Africa and America.³ In humans, myiasis prevails in unhealthy individuals frequently found in third world countries. The myiasis can be classified clinically as primary (larvae feed on the living tissue) and secondary (larvae feed on dead tissue).⁴ Depending on the condition of the involved tissue into accidental myiasis (larvae ingested along with food), semi specific (larvae laid on necrotic tissue in wound) and obligatory myiasis (larvae develop in living tissue). The obligatory myiasis is more harmful for

humans. The most common anatomic sites for myiasis are the nose, eye, lung, ear, anus, vagina and more rarely, the mouth. Myiasis involving the orodental complex is rare entity. Oral myiasis was first described by Laurence in 1909. Incidence of oral myiasis as compared to that of cutaneous myiasis is less as the oral tissue are not permanently exposed to the external environment.⁷ Condition leading to persistent mouth opening along with poor oral hygiene and alcoholism, salinity, suppurative lesion, neglected mandibular fracture, facial trauma, extraction wounds, anterior open bite, incompetent lips, and patient undergoing mechanical ventilation may predispose the patient to oral myiasis.⁸ anterior part of the oral cavity is the most affected. patient with advanced stages of oral squamous cell carcinoma also prone to this dreadful condition arising by infestation of maggots into the wound.⁹

CASE REPORT

A 40 years old male presented to the Department of Oral and Maxillofacial Surgery, Index Institute of Dental Sciences (Indore, M.P) with a chief complaint

of swelling and pricking, crawling sensation in relation to upper front teeth for 3 days. He gave history of trauma in the front tooth region 1 month back, in which right central incisor 11 got vertically fractured in labial and palatal part, also gives history of over-the-counter medication taken at that time. Also gives history that swelling started insidiously and increased to present size. It was associated with headache. Patient was from a low socioeconomic background and had a poor oral hygiene. Extraoral examination revealed incompetent lip and mouth breathing habit. Intraoral examination revealed a single diffuse swelling measuring 1cm x 1cm involving the anterior palatal area with relation to 11,12,21 tooth. Mucosa overlying the swelling appeared slightly inflamed reddish in color. A perforation was seen in between the two fractured segment of upper right central incisor from which the maggots were moving in that area. Gingival detachment from teeth 11,21 with bleeding was seen. On exploration 2 to 3 larvae were coming out from the exposed area. Larvae were tapered in shape and creamy white in color, their segments showed a

transverse striated part with brownish tip anteriorly. The larvae preserved in normal saline. Based on the history, clinical examination, and identification of larvae, a provisional diagnosis of oral myiasis was given. Under aseptic condition the manual removal of maggots was done by suffocation technique by topical use of turpentine oil-soaked roller gauge into the necrotic area. Total 49 larvae were removed with from necrosed area on 1st day, on 2nd day debridement of the area done under local anesthesia with full thickness flap raised from tooth 12 to 22, 7 more larvae removed. When no larvae found in wound. The wound was then sutured with nonabsorbable braided silk suture using a simple interrupted suture. The patient's management included I.V. Ceftriaxone 1gm, powder of amoxicillin + cloxacillin into the wound at the time of closure. After 3 days of hospitalization patient was discharged and advised to maintain proper oral hygiene and rinse the mouth with 0.2 percent chlorhexidine 3 times daily and was recalled after 2 days. The suture was removed after 7 days and complete healing was seen after 1 month of follow up.



Fig 1: Pre operative profile photograph



Fig 2: Intra-oral pre operative photograph



Fig 3: Incision and flap reflection



Fig 4: Debridement done



Fig 5: maggots

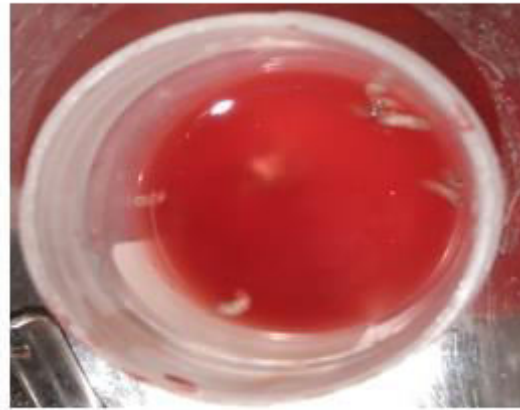


Fig 6: maggots removal done



Fig 7: Post operative

DISCUSSION

Zumpt defined myiasis as “the infestation of live human and vertebrate animals with dipterous larvae which at least for a certain period feed on the host’s dead or living tissue, liquid body substance or ingested food.”⁹ oral myiasis can affect all age groups but in infant it is more fatal¹⁰. It is associated with small nourished patients, neglected fracture, cerebral palsy, mouth breathing, anterior open bite, cancrum oris, poor oral hygiene, mechanical ventilation, patient undergoing radiotherapy, person living near animals, and debilitated patient with neglect of nursing or custodial personnel¹⁰. In this case patient associated with fractured central incisor. Oral myiasis is classified as (a) primary myiasis, when larvae feed on living tissue, and (b) secondary myiasis, when larvae feed on dead tissue. Depending upon the mode of infestation it is of three types: (a) accidental myiasis, when larvae get ingested along with food, (b) semi specific myiasis, when the larvae are laid on necrotic tissue of the wound, and (c) obligatory, when larvae affect undamaged skin. Based on the degree of host dependence, it is classified as (a) obligatory, where fly larvae are completely parasitic and depend upon the host for completion of their life cycle, (b) facultative, where the fly larvae are free living and only circumstantially adapt themselves to parasitic dependence to a host. Based on anatomic site, it can be

classified as (a) cutaneous myiasis, (b) myiasis of external orifices, and (c) myiasis of internal organs⁹. The management of myiasis include surgical debridement of wound with suffocation agents such as petroleum jelly, heavy oil, beeswax, raw meat, mineral oil, nail polish, adhesive tape, butter, chewing gum, turpentine oil, whitehead varnish, native tobacco leaf, chloroform, and ether. In present case management was done by suffocation technique roller gauge dipped with turpentine oil and placed over necrotic area total of 49 larvae were removed. The patient’s management included I.V. Ceftriaxone 1gm, powder of amoxicillin + cloxacillin into the wound as a structured treatment. According to Rossi-Schneider et al., human myiasis prevention involves fly population control, general cleanliness, and informing the public that individuals living in localities without basic sanitation are more predisposed to infestation.

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